	Learnin	g to Fly: The Wright	Brother's Adventure
		2008 Scier	
		State Frame	works
Mississippi Scien	се		
Grade 6			
Activity/Lesson	State	Standards	
The Society	MS	SCI.6.1.c.2	Use simple tools and resources to gather and compare information (using standard, metric, and non-standard units of measurement): Types of data (e.g., linear measures, mass, volume, temperature, time, area, perimeter)
			Infer explanations for why scientists might
		20101	draw different conclusions from a given set
The Society	MS	SCI.6.1.g	of data.
Wright Brothers: 1900 Glider	MS	SCI.6.1.c.2	Use simple tools and resources to gather and compare information (using standard, metric, and non-standard units of measurement): Types of data (e.g., linear measures, mass, volume, temperature, time, area, perimeter)
Wright Brothers: 1900 Glider	MS	SCI.6.1.e	Communicate scientific procedures and conclusions using diagrams, charts, tables, graphs, maps, written explanations, and/or scientific models.
Wright Brothers: 1900 Glider	MS	SCI.6.1.f	Evaluate the results or solutions to problems by considering how well a product or design met the challenge to solve a problem.
Wright Brothers: 1900 Glider	MS	SCI.6.1.g	Infer explanations for why scientists might draw different conclusions from a given set of data.
Wright Brothers: 1901 Glider	MS	SCI.6.1.c.2	Use simple tools and resources to gather and compare information (using standard, metric, and non-standard units of measurement): Types of data (e.g., linear measures, mass, volume, temperature, time, area, perimeter)
Wright Brothers: 1901 Glider	MS	SCI.6.1.e	Communicate scientific procedures and conclusions using diagrams, charts, tables, graphs, maps, written explanations, and/or scientific models.
Wright Brothers: 1901 Glider	MS	SCI.6.1.f	Evaluate the results or solutions to problems by considering how well a product or design met the challenge to solve a problem.
Wright Brothers: 1901 Glider	MS	SCI.6.1.g	Infer explanations for why scientists might draw different conclusions from a given set of data.

			Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
Wright Brothers:			measures, mass, volume, temperature, time,
1902 Glider	MS	SCI.6.1.c.2	area, perimeter)
			Communicate scientific procedures and
			conclusions using diagrams, charts, tables,
Wright Brothers:			graphs, maps, written explanations, and/or
1902 Glider	MS	SCI.6.1.e	scientific models.
			Evaluate the results or solutions to problems
Wright Brothers:			by considering how well a product or design
1902 Glider	MS	SCI.6.1.f	met the challenge to solve a problem.
			Infer explanations for why scientists might
Wright Brothers:			draw different conclusions from a given set
1902 Glider	MS	SCI.6.1.g	of data.
			Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
Wright Brothers:			measures, mass, volume, temperature, time,
1903 Flyer	MS	SCI.6.1.c.2	area, perimeter)
			Communicate scientific procedures and
Mainlet Duetle ene			conclusions using diagrams, charts, tables,
Wright Brothers:	MC	001.04.5	graphs, maps, written explanations, and/or
1903 Flyer	MS	SCI.6.1.e	scientific models.
			Evaluate the results or solutions to problems
Wright Brothers:			by considering how well a product or design
1903 Flyer	MS	SCI.6.1.f	met the challenge to solve a problem.
100011901		00	Infer explanations for why scientists might
Wright Brothers:			draw different conclusions from a given set
1903 Flyer	MS	SCI.6.1.g	of data.
, ,		3	Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
			measures, mass, volume, temperature, time,
Meet the Wrights	MS	SCI.6.1.c.2	area, perimeter)
			Infer explanations for why scientists might
			draw different conclusions from a given set
Meet the Wrights	MS	SCI.6.1.g	of data.
			Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
1			measurement): Types of data (e.g., linear
			measures, mass, volume, temperature, time,
1900: Kitty Hawks	MS	SCI.6.1.c.2	area, perimeter)

			Communicate scientific procedures and
			conclusions using diagrams, charts, tables,
			graphs, maps, written explanations, and/or
1900: Kitty Hawks	MS	SCI.6.1.e	scientific models.
			Evaluate the results or solutions to problems
			by considering how well a product or design
1900: Kitty Hawks	MS	SCI.6.1.f	met the challenge to solve a problem.
,			Infer explanations for why scientists might
			draw different conclusions from a given set
1900: Kitty Hawks	MS	SCI.6.1.g	of data.
			Design and conduct an investigation that
			includes predicting outcomes, using
1901: The First			experimental controls, and making
Improvement	MS	SCI.6.1.a	inferences.
			Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
1901: The First			measures, mass, volume, temperature, time,
Improvement	MS	SCI.6.1.c.2	area, perimeter)
			Communicate scientific procedures and
4004 The First			conclusions using diagrams, charts, tables,
1901: The First		001.0.4	graphs, maps, written explanations, and/or
Improvement	MS	SCI.6.1.e	scientific models.
1901: The First			Infer explanations for why scientists might draw different conclusions from a given set
Improvement	MS	SCI.6.1.g	of data.
improvement	IVIO	3C1.0.1.g	Investigate and describe the effects of forces
1901: The First			acting on objects: Gravity, friction,
Improvement	MS	SCI.6.2.c.1	magnetism, drag, lift, and thrust
Improvement	IVIO	001.0.2.0.1	Investigate and describe the effects of forces
1901: The First			acting on objects: Forces affecting the
Improvement	MS	SCI.6.2.c.2	motion of objects
			Mechanical energy transformed to another
1901: The First			form of energy (e.g., vibrations, heat through
Improvement	MS	SCI.6.2.d.2	friction)
			Develop a logical argument to explain how
			the forces which affect the motion of objects
			has real-world applications including (but not
			limited to) examples of Mississippi's
			contributions as follows: Aerospace industry
			(The Raspet Flight Research Laboratory,
			housed at Mississippi State University, is one
1901: The First			of the premier university flight research
Improvement	MS	SCI.6.2.f.2	facilities in the country.)

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	<u> </u>		Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
1904: Improvement			measures, mass, volume, temperature, time,
in Dayton	MS	SCI.6.1.c.2	area, perimeter)
			Communicate scientific procedures and
			conclusions using diagrams, charts, tables,
1904: Improvement			graphs, maps, written explanations, and/or
in Dayton	MS	SCI.6.1.e	scientific models.
			Investigate and describe the effects of forces
1904: Improvement			acting on objects: Gravity, friction,
in Dayton	MS	SCI.6.2.c.1	magnetism, drag, lift, and thrust
			Investigate and describe the effects of forces
1904: Improvement			acting on objects: Forces affecting the
in Dayton	MS	SCI.6.2.c.2	motion of objects
			Aerospace industry (The Raspet Flight
			Research Laboratory, housed at Mississippi
			State University, is one of the premier
1904: Improvement			university flight research facilities in the
in Dayton	MS	SCI.6.2.f.2	country.)
,			Use simple tools and resources to gather
			and compare information (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
1905: Complete a			measures, mass, volume, temperature, time,
Flight at Last	MS	SCI.6.1.c.2	area, perimeter)
r light at Last	IVIO	001.0.1.0.2	area, perimeter)
			Evaluate the results or solutions to problems
1905: Complete a			by considering how well a product or design
Flight at Last	MS	SCI.6.1.f	met the challenge to solve a problem.
r light at Last	IVIO	001.0.1.1	Infer explanations for why scientists might
1905: Complete a			draw different conclusions from a given set
Flight at Last	MS	SCI.6.1.g	of data.
riigiil al Lasi	IVIO	3C1.0.1.g	oi data.
	Learning to	o Elv: The Wright	Brother's Adventure
	Learning to	2008 Scier	
		State Framev	
Mississippi Science			
Grade 7			
Activity/Lesson	State	Standards	
			Develop a logical argument to explain why
			scientists often review and ask questions
The Society	MS	SCI.7.1.g	about the results of other scientists' work.
· · · · · · · · · · · · · · · ·	-		Develop a logical argument to explain why
Wright Brothers:			scientists often review and ask questions
1900 Glider	MS	SCI.7.1.g	about the results of other scientists' work.
1000 Ollubi	1010	551.7.1.g	Develop a logical argument to explain why
Wright Brothers:			scientists often review and ask questions
1901 Glider	MS	SCI 7 1 a	about the results of other scientists' work.
1901 Glidel	IVIO	SCI.7.1.g	about the results of other scientists Work.

			Develop a logical argument to explain why
Wright Brothers:			scientists often review and ask questions
1902 Glider	MS	SCI.7.1.g	about the results of other scientists' work.
1002 Gilder	IVIO	001.7.1.g	Develop a logical argument to explain why
Wright Brothers:			scientists often review and ask questions
1903 Flyer	MS	SCI.7.1.g	about the results of other scientists' work.
1303 Tiyol	IVIO	001.7.1.g	Develop a logical argument to explain why
			scientists often review and ask questions
Meet the Wrights	MS	SCI.7.1.g	about the results of other scientists' work.
Wieet the Wrights	IVIO	301.7.1.g	Collect and display data using simple tools
			and resources to compare information (using
			standard, metric, and non-standard
			measurement): Types of data (e.g., linear
4000. Kitha Havaka	MC	00174 - 0	measures, mass, volume, temperature, area,
1900: Kitty Hawks	MS	SCI.7.1.c.2	perimeter)
			Develop a logical argument to explain why
4000 1600 11		00174	scientists often review and ask questions
1900: Kitty Hawks	MS	SCI.7.1.g	about the results of other scientists' work.
 			Design, conduct, and draw conclusions from
1901: The First		201 - 4	an investigation that includes using
Improvement	MS	SCI.7.1.a	experimental controls.
 			Develop a logical argument to explain why
1901: The First		201 - 4	scientists often review and ask questions
Improvement	MS	SCI.7.1.g	about the results of other scientists' work.
			Compare the force (effort) required to do the
 			same amount of work with and without
1901: The First			simple machines (e.g., levers, pulleys, wheel
Improvement	MS	SCI.7.2.c	and axle, inclined planes).
			Describe the effects of unbalanced forces on
			the speed or direction of an object's motion:
			Variables that describe position, distance,
1901: The First			displacement, speed, and change in speed
Improvement	MS	SCI.7.2.f.1	of an object
			Describe the effects of unbalanced forces on
			the speed or direction of an object's motion:
1901: The First			Gravity, friction, drag, lift, electric forces, and
Improvement	MS	SCI.7.2.f.2	magnetic forces
			Develop a logical argument to explain why
			scientists often review and ask questions
New Data	MS	SCI.7.1.g	about the results of other scientists' work.
			Collect and display data using simple tools
			and resources to compare information (using
			standard, metric, and non-standard
			measurement):Tools (e.g., English rulers [to
			the nearest one-sixteenth of an inch], metric
			rulers [to the nearest millimeter],
			thermometers, scales, hand lenses,
			microscopes, balances, clocks, calculators,
			anemometers, rain gauges, barometers,
1903: Powered			hygrometers, telescopes, compasses, spring
Flight	MS	SCI.7.1.c.1	scales, pH indicators, stopwatches)

			Organize data in tables and graphs and
1903: Powered			analyze data to construct explanations and
Flight	MS	SCI.7.1.d	draw conclusions.
i iigiit	1110	001171110	Communicate results of scientific procedures
1903: Powered			and explanations through a variety of written
Flight	MS	SCI.7.1.e	and graphic methods.
i ligiti	IVIO	001.7.1.0	Describe the effects of unbalanced forces on
			the speed or direction of an object's motion:
			Variables that describe position, distance,
1903: Powered			displacement, speed, and change in speed
Flight	MS	SCI.7.2.f.1	of an object
i ligiti	IVIO	001.7.2.1.1	Communicate results of scientific procedures
1904: Improvement			and explanations through a variety of written
in Dayton	MS	SCI.7.1.e	and graphic methods.
in Dayton	IVIO	001.7.1.0	Compare the force (effort) required to do the
			same amount of work with and without
1904: Improvement			simple machines (e.g., levers, pulleys, wheel
in Dayton	MS	SCI.7.2.c	and axle, inclined planes).
III Dayton	IVIO	001.7.2.0	Describe the effects of unbalanced forces on
			the speed or direction of an object's motion:
1904: Improvement			Gravity, friction, drag, lift, electric forces, and
in Dayton	MS	SCI.7.2.f.2	magnetic forces
in Dayton	IVIO	501.7.2.1.2	Develop a logical argument to explain why
1905: Complete a			scientists often review and ask questions
Flight at Last	MS	SCI.7.1.g	about the results of other scientists' work.
i light at Last	IVIO	001.7.1.g	about the results of other scientists work.
	l earning	n to Fly: The Wright	Brother's Adventure
	Learning	2008 Scier	
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Mississippi Scienc	6	Otate France	
Grade 8			
Activity/Lesson	State	Standards	
Activity/Ec33011	Otate	Otaridards	Justify the importance of continued research
			and use of new technology in the
			development and commercialization of
			potentially useful natural products, including,
			but not limited to research efforts in
			Mississippi: The Thad Cochran National
			Center for Natural Products Research,
The Society	MS	SCI.8.4.g.1	housed at the University of Mississippi
The Oociety	IVIO	301.0.4.g.1	Justify the importance of continued research
			and use of new technology in the
			development and commercialization of
			potentially useful natural products, including,
			but not limited to research efforts in
			Mississippi: The Jamie Whitten Delta States
The Society	MS	SCI 9 4 7 2	Research Center in Stoneville, MS
The Society	INIO	SCI.8.4.g.2	ivesearch Center in Stuffeville, MS

			Justify the importance of continued research
			•
			and use of new technology in the
			development and commercialization of
			potentially useful natural products, including,
			but not limited to research efforts in
			Mississippi: The Mississippi Polymer
			Institute, housed at the University of
The Society	MS	SCI.8.4.g.3	Southern Mississippi
Wright Brothers:			Develop a logical argument to explain why
1900 Glider	MS	SCI.8.1.f	perfectly designed solutions do not exist.
Wright Brothers:			Develop a logical argument to explain why
1901 Glider	MS	SCI.8.1.f	perfectly designed solutions do not exist.
Wright Brothers:			Develop a logical argument to explain why
1902 Glider	MS	SCI.8.1.f	perfectly designed solutions do not exist.
Wright Brothers:			Develop a logical argument to explain why
1903 Flyer	MS	SCI.8.1.f	perfectly designed solutions do not exist.
, , ,			Summarize data to show the cause and
			effect relationship between qualitative and
			quantitative observations (using standard,
			metric, and non-standard units of
			measurement): Types of data (e.g., linear
			measures, mass, volume, temperature, area,
1000 Kitty Howks	MC	CCI 0 1 0 2	•
1900: Kitty Hawks	MS	SCI.8.1.c.2	perimeter)
1000 Kitty Havden	MC	001046	Develop a logical argument to explain why
1900: Kitty Hawks	MS	SCI.8.1.f	perfectly designed solutions do not exist.
4004. The First			Design, conduct, and analyze conclusions
1901: The First		001.0.4	from an investigation that includes using
Improvement	MS	SCI.8.1.a	experimental controls.
			Justify the importance of continued research
			and use of new technology in the
			development and commercialization of
			potentially useful natural products, including,
			but not limited to research efforts in
			Mississippi: The Thad Cochran National
1901: The First			Center for Natural Products Research,
Improvement	MS	SCI.8.4.g.1	housed at the University of Mississippi
			Justify the importance of continued research
			and use of new technology in the
			development and commercialization of
			potentially useful natural products, including,
			but not limited to research efforts in
1901: The First			Mississippi: The Jamie Whitten Delta States
Improvement	MS	SCI.8.4.g.2	Research Center in Stoneville, MS
protomont		50	Justify the importance of continued research
			and use of new technology in the
			development and commercialization of
			·
			potentially useful natural products, including,
			but not limited to research efforts in
1004. The First			Mississippi: The Mississippi Polymer
1901: The First	140	00104	Institute, housed at the University of
Improvement	MS	SCI.8.4.g.3	Southern Mississippi

			Design conduct and analysis conductions
			Design, conduct, and analyze conclusions
		201.0.4	from an investigation that includes using
New Data	MS	SCI.8.1.a	experimental controls.
1902: Success at			Develop a logical argument to explain why
Last	MS	SCI.8.1.f	perfectly designed solutions do not exist.
			Design, conduct, and analyze conclusions
1903: Powered			from an investigation that includes using
Flight	MS	SCI.8.1.a	experimental controls.
			Summarize data to show the cause and
			effect relationship between qualitative and
			quantitative observations (using standard,
			metric, and non-standard units of
			measurement): Tools (e.g., English rulers [to
			the nearest one-sixteenth of an inch], metric
			rulers [to the nearest millimeter],
			thermometers, scales, hand lenses,
			microscopes, balances, clocks, calculators,
			anemometers, rain gauges, barometers,
			hygrometers, telescopes, compasses, spring
1903: Powered			''
	MS	0010464	scales, pH indicators, stopwatches,
Flight	IVIS	SCI.8.1.c.1	graduated cylinders, medicine droppers)
1903: Powered	N40	001045	Develop a logical argument to explain why
Flight	MS	SCI.8.1.f	perfectly designed solutions do not exist.
			Distinguish the motion of an object by its
			position, direction of motion, speed, and
1903: Powered			acceleration and represent resulting data in
Flight	MS	SCI.8.2.c	graphic form in order to make a prediction.
1905: Complete a			Develop a logical argument to explain why
Flight at Last	MS	SCI.8.1.f	perfectly designed solutions do not exist.
	Learning to		rother's Adventure
		2008 Science	
		State Framewo	orks
Mississippi Science			
Grades 9-12 (Phys			
Activity/Lesson	State	Standards	
			Identify questions that can be answered
The Society	MS	SCI.9-12.1.b	through scientific investigations.
			Analyze procedures and data to draw
The Society	MS	SCI.9-12.1.e	conclusions about the validity of research.
			Use appropriate laboratory safety symbols
			and procedures to design and conduct a
Wright Brothers:			scientific investigation: Safety symbols and
1900 Glider	MS	SCI.9-12.1.a.1	safety rules in all laboratory activities
	1		Describe (with supporting details and
			diagrams) how the kinetic energy of an
			object can be converted into potential energy
			(the energy of position) and how energy is
Wright Brothers:			transferred or transformed (conservation of
	MC	SCI 0 40 0 c	· ·
1900 Glider	MS	SCI.9-12.2.c	energy).

			Describe (with supporting details and
			diagrams) how the kinetic energy of an
			object can be converted into potential energy
Mark Dark			(the energy of position) and how energy is
Wright Brothers:		0010400	transferred or transformed (conservation of
1901 Glider	MS	SCI.9-12.2.c	energy).
			Use appropriate laboratory safety symbols
			and procedures to design and conduct a
Wright Brothers:			scientific investigation: Safety symbols and
1902 Glider	MS	SCI.9-12.1.a.1	safety rules in all laboratory activities
			Describe (with supporting details and
			diagrams) how the kinetic energy of an
			object can be converted into potential energy
			(the energy of position) and how energy is
Wright Brothers:			transferred or transformed (conservation of
1902 Glider	MS	SCI.9-12.2.c	energy).
			Use appropriate laboratory safety symbols
			and procedures to design and conduct a
Wright Brothers:			scientific investigation: Safety symbols and
1903 Flyer	MS	SCI.9-12.1.a.1	safety rules in all laboratory activities
1303 FlyCi	IVIO	001.0 12.1.4.1	Describe (with supporting details and
			diagrams) how the kinetic energy of an
			object can be converted into potential energy
Mark Doubles			(the energy of position) and how energy is
Wright Brothers:		0010400	transferred or transformed (conservation of
1903 Flyer	MS	SCI.9-12.2.c	energy).
			Describe (with supporting details and
			diagrams) how the kinetic energy of an
			object can be converted into potential energy
			(the energy of position) and how energy is
			transferred or transformed (conservation of
1900: Kitty Hawks	MS	SCI.9-12.2.c	energy).
1901: The First			Analyze procedures and data to draw
Improvement	MS	SCI.9-12.1.e	conclusions about the validity of research.
			Formulate and revise scientific explanations
1901: The First			and models using logic and evidence (data
Improvement	MS	SCI.9-12.1.f	analysis).
'			,
			Demonstrate and explain the basic principles
			of Newton's three laws of motion including
			calculations of acceleration, force, and
			momentum: Net force (accounting for
1901: The First			gravity, friction, and air resistance) and the
	MS	SCI.9-12.2.a.2	resulting motion of objects
Improvement	IVIO	JUI.3-12.2.d.2	
1004. The 5:			Explain the connection between force, work,
1901: The First	MO	00104001	and energy: Force exerted over a distance
Improvement	MS	SCI.9-12.2.b.1	(results in work done)
 			Explain the connection between force, work,
1901: The First			and energy: Force-distance graph (to
Improvement	MS	SCI.9-12.2.b.2	determine work)

			Communicate effectively to present and
Now Data	MC	0010404 ~	explain scientific results, using appropriate
New Data	MS	SCI.9-12.1.g	terminology and graphics.
1000: 0::			Formulate and revise scientific explanations
1902: Success at		00104046	and models using logic and evidence (data
Last	MS	SCI.9-12.1.f	analysis).
			Interpret and generate graphs (e.g., plotting
			points, labeling x-and y-axis, creating
1903: Powered			appropriate titles and legends for circle, bar,
Flight	MS	SCI.9-12.1.d	and line graphs.)
			Formulate and revise scientific explanations
1903: Powered			and models using logic and evidence (data
Flight	MS	SCI.9-12.1.f	analysis).
			Communicate effectively to present and
1903: Powered			explain scientific results, using appropriate
Flight	MS	SCI.9-12.1.g	terminology and graphics.
			Demonstrate and explain the basic principles
			of Newton's three laws of motion including
			calculations of acceleration, force, and
1903: Powered			momentum: Inertia and distance-time graphs
Flight	MS	SCI.9-12.2.a.1	to determine average speed
			Explain the connection between force, work,
1903: Powered			and energy: Force-distance graph (to
Flight	MS	SCI.9-12.2.b.2	determine work)
1903: Powered			Explain how sound intensity is measured and
Flight	MS	SCI.9-12.3.d	its relationship to the decibel scale.
g			Communicate effectively to present and
1904: Improvement			explain scientific results, using appropriate
in Dayton	MS	SCI.9-12.1.g	terminology and graphics.
2 4) 10		Jene Ling	Explain the connection between force, work,
1904: Improvement			and energy: Force exerted over a distance
in Dayton	MS	SCI.9-12.2.b.1	(results in work done)
III Dayton		001.0 12.2.0.1	Explain the connection between force, work,
1904: Improvement			and energy: Force-distance graph (to
in Dayton	MS	SCI.9-12.2.b.2	determine work)
III Dayton	IVIO	001.0 12.2.0.2	Describe (with supporting details and
			diagrams) how the kinetic energy of an
			object can be converted into potential energy
			(the energy of position) and how energy is
1904: Improvement			transferred or transformed (conservation of
in Dayton	MS	SCI.9-12.2.c	energy).
III Dayton	IVIO	301.9-12.2.0	energy).
	Learning to Ele	: The Wright B	rother's Adventure
	Learning to Fig	7: The Wright B 2008 Scienc	
		State Framewo	-
Micciccippi Colones		State Framewo	N N S
Mississippi Science			
Grades 9-12 (Physic		Ctondord	
Activity/Lesson	State	Standards	Clarify response guestians and design
The Cociety	MC	SCI 0 40 4 5	Clarify research questions and design
The Society	MS	SCI.9-12.1.b	laboratory investigations.

The Society Wright Brothers: 1900 Glider	MS MS	SCI.9-12.2.b SCI.9-12.1.c	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall). Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
Wright Brothers: 1900 Glider Wright Brothers: 1901 Glider	MS MS	SCI.9-12.2.b SCI.9-12.1.c	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall). Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
Wright Brothers: 1901 Glider Wright Brothers: 1902 Glider	MS	SCI.9-12.1.c	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall). Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
Wright Brothers: 1902 Glider Wright Brothers: 1903 Flyer	MS	SCI.9-12.1.c	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall). Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).

Wright Brothers: 1903 Flyer	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
Meet the Wrights	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
1900: Kitty Hawks	MS	SCI.9-12.1.c	Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
1900: Kitty Hawks	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
1901: The First	MS	SCI.9-12.1.f	Formulate and revise scientific explanations and models using logic and evidence (data analysis).
1901: The First	MS	SCI.9-12.2.a.3	Use inquiry to investigate and develop an understanding of the kinematics and dynamics of physical bodies: Vector techniques and free-body diagrams to determine the net force on a body when several forces are acting on it
1901: The First Improvement	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall). Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate
New Data	MS	SCI.9-12.1.c	laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
New Data	MS	SCI.9-12.1.e	Evaluate procedures, data, and conclusions to critique the scientific validity of research.

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New Data 1902: Success at	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall). Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory
Last	MS	SCI.9-12.1.c	development).
1902: Success at Last	MS	SCI.9-12.1.f	Formulate and revise scientific explanations and models using logic and evidence (data analysis).
1902: Success at Last	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
1903: Powered Flight	MS	SCI.9-12.1.c	Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
1903: Powered Flight	MS	SCI.9-12.1.d	Organize data to construct graphs (e.g., plotting points, labeling x-and y-axis, creating appropriate titles and legends for circle, bar, and line graphs) draw conclusions and make inferences.
1903: Powered Flight	MS	SCI.9-12.1.f	Formulate and revise scientific explanations and models using logic and evidence (data analysis).
1903: Powered Flight	MS	SCI.9-12.2.a.2	Use inquiry to investigate and develop an understanding of the kinematics and dynamics of physical bodies: Vector problems (solved mathematically and graphically)
1903: Powered Flight	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).
1904: Improvement in Dayton	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).

1905: Complete a Flight at Last	MS	SCI.9-12.1.c	Demonstrate the use of scientific inquiry and methods to formulate, conduct, and evaluate laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
1905: Complete a Flight at Last	MS	SCI.9-12.2.b	Analyze, describe, and solve problems by creating and utilizing graphs of one-dimensional motion (e.g., position, distance, displacement, time, speed, velocity, acceleration, the special case of freefall).